



Vocational Technology Education as a Veritable Pathway to Driving the Nigerian Economy

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Abstract

The Nigerian economy is characterized by a number of challenges such as high levels of youth unemployment, poverty, industrialization, and overdependence on oil money. Vocational Technology Education (VTE) can provide a transformative solution to the deficiencies of the Nigerian economy. This article, therefore, discusses the conceptual underpinnings of vocational technology, the Nigerian economic scenario, and the role of technical and vocational education and training in the development of the Nigerian economy. This discussion is important given the challenges facing the Nigerian economy. Based on the findings of empirical studies carried out on the role of technical and vocational education and training in the development of the Nigerian economy, this article identifies the challenges facing the effective implementation of vocational technology education. The challenges facing the effective implementation of VTE are identified as inadequate finance, poor infrastructure, obsolescence of the curriculum, and stigmatization. This article recommends strategic steps to be taken to address the challenges facing the effective implementation of VTE. This article concludes that the Nigerian economy can benefit significantly from the effective implementation of vocational technology education.

Keywords: Vocational Technology Education, Youth Unemployment, Industrialization, Technical Skills, Economic Development

Introduction

Nigeria, Africa's most populous nation and largest economy by gross domestic product (GDP), has plenty of human and natural resources that should place it among the world's prosperous countries. However, the nation still faces high unemployment, widespread poverty, crumbling infrastructure, and a largely unskilled labor force that does not meet the needs of a modern industrial economy. (World Bank Group, 2022). Despite several policy reforms and development programmes, the formal education system has continued to produce graduates who lack practical, employment-relevant skills, contributing to a growing skills mismatch between the labour market and the educational outcomes of Nigerian institutions (Chiamogu & Chiamogu, 2025). Vocational Technology Education (VTE), broadly defined as structured training in technical, occupational, and practical skills intended for specific trades or professions, has long been recognised globally as a catalyst for economic transformation. In fastly developing economies of Germany, South Korea, Singapore, and China, for instance, the presence of a robust technical and vocational education and training (TVET) sector has over time formed the bedrock for the development of these economies (UNESCO-UNEVOC, 2022). The experiences of these countries are relevant to Nigeria as a nation in its quest for economic diversification and a new economic trajectory towards a new path of development. The essence of vocational technology in Nigeria cannot be overemphasized. According to the National Bureau of Statistics, (NBS, 2024) the rate of unemployment with Nigerian youths was estimated at 33.3%, implying millions of young people without a decent means of livelihood. Conversely, there has been a consistent shortage of skilled artisans, technicians, and tradespeople

in the construction industry, manufacturing sector, agriculture, information and communications technology (ICT), and the healthcare sector.

The paradox of a surplus workforce and a shortage of technical expertise underscores the need for a new vision for the reinvigoration of the importance of vocational education as a national imperative. This article undertakes a comprehensive scholarly examination of vocational technology as a pathway to driving the Nigerian economy. It explores the conceptual framework underlying VTE, surveys the current state of the Nigerian economy, evaluates empirical evidence on how technical skills acquisition contributes to economic development, and analyses the specific impact of VTE on youth unemployment reduction, poverty alleviation, and industrial growth. This article also identifies the challenges facing VTE in terms of its structure, institutions, and socio-cultural challenges. It also offers strategies and recommendations to the stakeholders at various levels. The paper concludes with a reflection on the prospects of the future of vocational technology as a change agent in the Nigerian economic context.

Vocational technology, as a field of study and practice, represents a distinct crossroads where education, industry, and socio-economic growth intersect. It is generally understood as the process of learning and gaining knowledge, skills, and competencies that allow individuals to perform certain functions in the productive sectors of the economy (Federal Republic of Nigeria, 2023). Vocational technology covers the broad spectrum of technology, such as electrical/electronic technology, building technology, mechanical technology, agricultural science, computer technology, garment making, plumbing, cosmetology, and catering and hotel management, among others. Two dominant theoretical frameworks guided the study and promotion of vocational technology in development discourse. The first is the human capital theory, which was first proposed by Schultz (1961) and later developed by Becker (1964). The theory argues that investing in education and training improves the productivity and earnings of individuals and the overall economy. Under this framework, VTE can be seen as an investment in the productivity of the workforce, yielding not only economic returns at the individual level but also at the national level. Validation of this framework within the sub-Saharan region has shown that training in technical skills has the effect of increasing the income-generating and occupational mobility potential of graduates. (Hanushek et al., 2022).

The second framework is Amartya Sen's capability approach, which shifts the analytical lens from aggregate economic output to individual freedoms and substantive opportunities (Sen, 1999). From the perspective of this framework, vocational technology education is valued not merely for its economic returns but for its capacity to expand human agency, dignity, and social participation. VTE allows individuals to utilize their personal qualities and social resources to generate functional outputs such as self-employment, entrepreneurship, and leadership that go beyond economic productivity (Nussbaum, 2011). In addition to these models, the concept of the knowledge economy has been proposed to highlight the rise of the role of technology, innovation, and knowledge in facilitating economic growth (OECD, 2022). Within a global production system characterized by terms such as automation, digitization, and Industry 4.0, VET will need to extend to include not just craft skills but also digital literacy, robotics, renewable energy, and precision manufacturing. Nigeria's VTE institutions must therefore position themselves at this evolving frontier to remain relevant and impactful.

Overview of the Nigerian Economy

Nigeria has massive economic potential, but it's always wrestling with deep-rooted problems and the complicated mess of having plenty of resources but not enough good governance. In 2023, Nigeria was Africa's biggest economy, with a GDP of over \$477 billion (IMF, 2024). The country is the largest producer of oil in the continent, with oil contributing over 85% to foreign exchange earnings and about 60% to government revenue (NBS, 2024). This overdependence on the export of crude oil has made the country's economy too sensitive to external price shocks, leading to boom and bust economic cycles. The non-oil sectors, such as the agricultural sector, the manufacturing industry, the trade sector, the telecommunication industry, and the service industry, contribute significantly to the country's GDP, although they remain underdeveloped compared to their full potential. The agricultural sector, which employs about 36% of the country's working population, is characterised by low productivity and lack of mechanization and value chain development (Food and Agriculture Organization [FAO], 2023). The manufacturing sector, which is expected to be at the backbone of the country's industrialization process, is operating at very low production capacity due to lack of infrastructure, high cost of energy, and lack of access to technicians (Manufacturers Association of Nigeria [MAN], 2023).

Inflation remains a key obstacle to economic development in the country, with the NBS (2024). Headline inflation shot up to 28.9% in December 2023 (NBS, 2024), eating away at people's buying power and scaring off investors. The level of poverty is also frighteningly high in Nigeria, with the World Bank Group (2022) reporting that the total population living below the international poverty line of \$2.15 per day in Nigeria is estimated at over 87 million and that the country has the second-largest number of extremely poor individuals in the world. Under these circumstances, the Nigerian governments have formulated various plans on economic diversification, including the most prominent ones such as the Economic Recovery and Growth Plan (2017-2020) and its successor, the Nigeria Economic Sustainability Plan (2020). Skills development and vocational training were identified as key pillars in the economic diversification plans, as noted in the Economic Recovery and Growth Plan 2017–2020, and also in the Nigeria Economic Sustainability Plan 2020, developed by the Federal Ministry of Finance, Budget, and National Planning in 2020.

The Role of Vocational Technology Education in Economic Development of Nigeria

The link between vocational technology and economic development is clearly established in the literature, both theoretically and empirically. At the macro-level, the TVET system can provide an industry with technically competent human capital that can drive industrialization, productivity, and innovation. At the microeconomic level, vocational training raises individual incomes, reduces dependency on public welfare, and fosters entrepreneurial activity. These micro-level effects aggregate into measurable improvements in national productivity, GDP growth, and structural economic transformation (Palmer, 2007). In Nigeria, vocational technology plays a critical role across several economic domains. In agriculture, VTE programmes in agronomy, crop science, animal husbandry, and food processing train farmers and agripreneurs to adopt improved techniques, increase yields, and add value to raw agricultural produce. Studies have shown that technically trained farmers in Nigeria achieve significantly higher productivity and income compared to those without formal agricultural training (Fadairo et al., 2023). Considering that agriculture remains a primary livelihood for the majority of rural Nigerians, investments in agricultural VTE have disproportionately large poverty-reduction impacts.

In the construction and built environment sector, VTE-trained artisans including bricklayers, plumbers, electricians, and civil engineering technicians are indispensable to Nigeria's infrastructure development aspirations. The ambitious housing and infrastructure plans of the Nigerian government, which include the National Housing Fund Scheme, require hundreds of thousands of skilled technical personnel. Yet the chronic shortage of such workers drives up construction costs, delays project timelines, and ultimately limits the state's capacity to deliver public infrastructure (Oni et al., 2024). The ICT and digital economy sector presents perhaps the most dynamic arena for VTE contribution. Nigeria's burgeoning tech ecosystem, anchored in Lagos (often called 'Africa's Silicon Valley'), has demonstrated the transformative potential of technical skills in generating employment and export earnings. Programmes that train young Nigerians in software development, data analytics, cybersecurity, and digital marketing have yielded demonstrable economic returns, with the ICT sector contributing approximately 18% of GDP in 2023 (NBS, 2024). The National Information Technology Development Agency (NITDA) and various state-level digital skills initiatives have leveraged VTE approaches to accelerate tech talent development, underscoring the sector's responsiveness to targeted vocational training.

Impact Vocational Technology Education on Youth Unemployment and Poverty Reduction

Youth unemployment is one of the most critical socioeconomic challenges facing Nigeria today. The youth bulge, as the 60% of the estimated 220 million people living in Nigeria today who are less than 25 years old is called, is at the same time one of the greatest opportunities and challenges facing the country because it has the potential to cause a socioeconomic boom akin to the demographic dividend enjoyed by the economies of East Asia in the latter half of the twentieth century (United Nations Population Fund [UNFPA], 2023). Left idle and unskilled, however, it threatens social cohesion, political stability, and long-term growth prospects. Vocational technology education directly targets youth unemployment by providing young people with market-relevant skills that facilitate entry into the labour force or enable self-employment. Empirical evidence from Nigeria and comparable African countries consistently shows that TVET graduates enjoy lower unemployment rates, higher earnings, and faster labour market transitions compared to graduates of general secondary or tertiary education without practical skills components (Paramole & Adeoye, 2024). Ogidan et al. (2025), surveyed 118 female TVET graduates across 90 institutions and reported that "a large proportion" secured gainful employment.

The poverty reduction impact of vocational technology operates through multiple channels. At the individual level, skill acquisition increases earning power and asset formation and helps to insulate individuals from economic shocks. At the household level, a technically trained individual has the capacity to support multiple dependents and lift households out of poverty. At the community level, skilled artisans and businesspeople contribute to local economic activities and help to create demand for other goods and services. They also help to create jobs for others. Various estimates on these effects are available. Gender dimensions of VTE and poverty reduction merit particular attention. Women represent a disproportionate share of Nigeria's poor, yet are systematically underrepresented in vocational training programmes, particularly in technical fields such as engineering and construction (Taiwo, 2025). Programmes that deliberately target female participation in VTE have demonstrated significant impact on women's economic empowerment, reduction of gender-based income inequalities, and improvement of household welfare indicators. The Strengthening Civic Advocacy and Local Engagement (SCALE) programme, supported by USAID in northern Nigeria, is one example of a gender-responsive VTE initiative that has measurably improved female economic participation in traditionally male-dominated skilled trades (USAID, 2023).

Industrialization through Technical Skills Acquisition in Vocational Technology Education

The role of industrialization as a major contributor to economic growth and poverty reduction is now well accepted. Indeed, the past experience of all developed economies has been marked by strong industrialization phases, with a highly educated and technically skilled workforce. For Nigeria, industrialization is a necessity for diversification, substitution, competitiveness, and job creation on a massive scale. However, the core thesis of this section is that VTE is a necessary antecedent for the much-needed industrialization in Nigeria. Technical skills form the human infrastructure of industrial production. Manufacturing enterprises, ranging from micro and small enterprises (MSEs) producing artisanal goods to large-scale enterprises producing electronic components or processing agro-commodities, rely on workers who possess specialized knowledge. Electrical engineers, mechanical technicians, quality control inspectors, CNC machine operators, welders, and industrial chemists do not emerge spontaneously; they are products of deliberate, well-designed technical education and training systems. When such systems are weak or dysfunctional, industries are forced to rely on expatriate technical labour; a costly and counterproductive arrangement that drains foreign exchange and stifles domestic capacity building (Joseph & Rosemary, 2022).

The manufacturing industry in Nigeria has been operating far below its full potential, with a contribution of only 8.6% to GDP, while the average for Africa is 12%, and the expected target of 25% is set out in Vision 20:2020, as outlined in the document by the Manufacturers Association of Nigeria (MAN, 2023). The major impediment is the lack of skilled technical manpower. According to a research carried out by the Lagos Chamber of Commerce and Industry, it was found that 68% of manufacturing firms in Nigeria listed skills shortage as a major impediment to their growth. The firms cited challenges that came up during the recruitment of skilled welders, electricians, precision machinists, and technical supervisors. The link between VTE and industrialization is further evidenced by international experience. Germany's dual system of vocational education in which apprentices split time between school-based instruction and enterprise-based training, is widely credited as a cornerstone of German industrial competitiveness (Euler, 2022). South Korea's rapid industrial transformation from a low-income agrarian economy in the 1960s to a high-income technology powerhouse by the 1990s was deliberately engineered through massive state investment in technical education aligned with industrial policy objectives (Fleckenstein, 2024). Nigeria's industrialization strategy must incorporate these lessons, designing TVET systems that are closely integrated with the actual skill demands of emerging and priority industries.

Challenges Facing Vocational Technology Education in Nigeria

Despite its significance, vocational technology education in Nigeria has been confronted with a cluster of significant challenges that have limited its effectiveness and expansion. These challenges are varied; they touch on various aspects that are systemic, institutional, and even cultural. These challenges must be addressed if VTE is to reach its full potential.

The first and perhaps most pressing challenge facing VTE is that of funding. VTE, like any technology-based education, is resource-intensive. It requires laboratories, workshops, equipment, tools, and materials. Regrettably, the Federal Government's allocation to education in the budget annually has always been below the UNESCO threshold, which is 26% of the total budget. Moreover, within that allocation, technical and vocational institutions have always been given meager allocations. This has led to an explosion in the number of state technical colleges and polytechnics,

all characterized by obsolete equipment, decaying infrastructure, and inadequate learning materials. This has meant that students are being equipped with technology that is decades out of date and not suited for the current environment

The lack of qualified and motivated VTE instructors also presents another major challenge. It should be noted that successful vocational education requires instructors with both theoretical and practical industry experience. These are hard-to-find resources in the Nigerian public education sector because of the low salaries and lack of career progression opportunities (Okolie et al., 2019). Brain drain is another challenge in the VET sector in Nigeria. Brain drain refers to the exodus of skilled and knowledgeable people with the right background and qualifications suitable for VTE instructor roles in the country in search of employment opportunities in foreign countries. It should be noted that the technical colleges in the country have a high rate of vacant instructor positions in various technical fields. A 2005 Federal Republic of Nigeria report found a need for 1,058 teachers across all federal science and technical colleges. About 33% of available teachers are considered inadequately trained. Nigeria has the highest pupil-to-teacher ratio in West Africa at 33 pupils to a teacher (Ladan, 2023).

The obsolescence of the VET curriculum presents a major challenge in the VET sector in Nigeria. It should be noted that the VET curricula used in various vocational schools in Nigeria have remained largely unchanged since the 1970s and 1980s with no major updates in recent years (Okoye & Chijioke, 2023). The disconnect between VTE curricula and industry needs means that graduates frequently possess skills that are in low demand, while high-demand technical skills remain in perennial short supply.

Social stigmatisation of vocational education constitutes a cultural obstacle of considerable magnitude. Nigerian society has historically privileged academic over vocational qualifications, associating university education with social prestige and technical training with intellectual inadequacy or lower social status (Nawi et al., 2024). This deeply entrenched attitude discourages talented young people from enrolling in vocational programmes, directs disproportionate parental investment toward university preparation irrespective of aptitude or labour market signals, and perpetuates the very unemployment it seeks to avoid. Overcoming this cultural bias requires sustained public communication campaigns, success story amplification, and policy interventions that enhance the social and economic standing of VTE pathways.

Access and equity challenges are also a barrier to VTE. Technical colleges are mainly found in urban areas; thus, rural populations, who are a majority of poor Nigerians, are at a disadvantage as far as quality vocational training is concerned. Physical distance, transportation costs, gender barriers, and socioeconomic disadvantages compound this accessibility deficit (Taiwo, 2025).

Furthermore, the disabled and vulnerable groups also experience structural challenges in accessing VTE programmes. This therefore limits the social reach of the programmes that already exist

Analysis: Strategies for Enhancing Vocational Technical Education in Nigeria

Addressing the multifaceted challenges confronting VTE in Nigeria requires a comprehensive, multi-pronged strategy that engages government, industry, civil society, and international development partners. Several evidence-based strategies are proposed here, drawing on best practices from both the Nigerian context and international experience.

First, the adoption of a robust industry-education partnership model is essential for ensuring the relevance and quality of VTE programmes. Formal collaboration frameworks that involve industry associations in curriculum development, equipment donation, instructor secondment, and graduate placement have demonstrated significant effectiveness in improving VTE outcomes in multiple contexts (ILO, 2023). The National Competency Standards (NCS) framework advocated through NBTE is a basis for industry alignment in the curriculum. However, its application is still inconsistent. The establishment of industry advisory boards in all technical colleges and tax incentives for organizations that invest in VTE partnerships is a strategy to improve this strategic direction.

Second, modernizing and expanding the apprenticeship system is another strategy to improve skills development in a cost-effective and culturally appealing manner. Nigeria has a long history of apprenticeship training, especially Igbo apprenticeship (Igba-Boi), which has been recognized as a major contributor to the high number of successful entrepreneurs in southeastern Nigeria (Afunugo & Molokwu, 2024). Expanding and formalizing the system to include

more training and protective mechanisms for apprentices is also an option for improving skill training without the need to develop new infrastructure.

Thirdly, the use of information and communications technology in the delivery of VTE programmes presents an opportunity to increase access to the programmes, especially in rural and disadvantaged areas. Blended learning strategies that integrate online learning and practical sessions at skill centres have also been effective in countries such as Nigeria. (Fadairo et al., 2023). The National Open University of Nigeria (NOUN) and several state governments have piloted distance and e-learning VTE programmes with encouraging early results. However, these models will require investments in digital infrastructure, device distribution, and instructor digital literacy, as well as content development in local languages.

Fourth, additional and ring-fencing public funds for VTE is non-negotiable. Using successful models from South Korea, Ghana and Germany, Nigeria should consider setting aside a statutory minimum percentage of its education budget, a minimum of 15 percent, to finance Technical and Vocational Education and Training. A National TVET Fund could be established to mobilize additional funds from the private sector through a levy on payroll taxes, with funds being allocated to training institutions based on performance and graduate employment outcomes (Palmer, 2007).

Fifth, purposeful gender mainstreaming in VTE programmes is critical for maximising social impact and economic inclusion. This includes scholarship and stipend programmes specifically targeting women in underrepresented technical fields, gender-sensitive instructional materials and classroom environments, mentorship programmes pairing female VTE students with industry professionals, and community sensitization campaigns to challenge patriarchal norms that constrain female participation in technical education. Approaches such as these have proven to significantly improve female participation and rate of completion with male-dominant disciplines (UNFPA, 2023).

Discussion: Future Prospects

The future of vocational technology in Nigeria, far from being bleak, is also full of opportunities, despite the various challenges that are likely to be present. There are various macro-level factors that are creating an environment where VTE systems are likely to have a major impact on the country's economy. Firstly, Nigeria is a very young country, and this is likely to continue in the future, given that the United Nations has projected that by the year 2050, Nigeria is likely to have a population of 400 million people, thus becoming the fourth most populous country in the world (United Nations Department of Economic and Social Affairs [UNDESA], 2022). The ability of this country to manage this increasing population in a productive way, thus turning this into an asset instead of a liability, will depend on its ability to skill its people through its skills development ecosystem, of which VTE is a central pillar.

The acceleration of digitalisation across Nigerian industry and the informal economy is creating new categories of technical skills that VTE institutions are uniquely positioned to address. Fintech, agritech, health technology, and smart manufacturing are among the fastest-growing sectors in Nigeria's economy, and all require workers with blended technical and digital competencies (GSMA, 2023). Responsive VTE institutions that develop programmes in solar energy installation and maintenance, precision agriculture, medical device repair, and drone operation among many other emerging fields will be well-positioned to serve both individual students and national development objectives simultaneously.

Nigeria's ratification of the African Continental Free Trade Area (AfCFTA) agreement opens the country's economy to a continental market of over 1.4 billion consumers and a combined GDP exceeding USD 3.4 trillion. For Nigerian enterprises to be competitive in the expanded market, especially in the areas of manufactured products, processed foods, and services, they will need a technically skilled workforce to compete favourably on the continent. VTE thus transforms into not just a tool for social welfare provision but an essential component of Nigeria's export competitiveness drive (World Bank, 2020).

Going forward, the integration of artificial intelligence technologies into the production value chain will pose a challenge and an opportunity to the VTE. On one side, the technology will certainly result in the obsolescence of some technical job types. However, on the other side, it will generate a need for a higher order of technical skills in areas such as mechatronics, automation systems maintenance, data quality management, and human-computer interaction

(World Economic Forum [WEF], 2023). Nigeria's VTE system will thus have to adapt to the incorporation of such emerging technical skills into the curriculum and instructor skills to ensure that the products of the system are not just relevant to the job market of the day but to the productive needs of the next decade.

Suggestions

The implementation of the above-mentioned strategic directions in terms of policy action requires commitments from different stakeholders. The following are the recommendations for the government, educational institutions, the private sector, and development partners, respectively.

For the Federal and State Governments of Nigeria, the most important requirement for the Federal and State Governments of Nigeria is legislative and fiscal commitment. The National Assembly needs to review the National Policy on Education in order to include a mandate for increased investment in TVET and the development of quality standards for TVET institutions. The proposed National TVET Fund needs to be established under a unique governance structure that ensures accountability. State governments, which own the technical colleges, need to increase their budget allocations for education in VTE, repair decaying infrastructure in these facilities, and employ qualified instructors for these facilities.. The Federal Ministry of Education should establish a National TVET Coordination Centre to harmonize policy, programme standards, and data collection across the three tiers of government.

For VTE institutions including federal and state technical colleges, polytechnics, and innovation enterprise institutions, the imperative is continuous curriculum reform and quality improvement. Institutions should conduct biennial labour market needs assessments in collaboration with industry partners and update curricula accordingly. Staff development programmes ensuring that instructors regularly engage in industry attachments of no less than three months every two years should be institutionalized. Institutional leadership should pursue international accreditation partnerships, notably through UNESCO-UNEVOC's international network, to benchmark quality standards and access global best practices.

The private sector, particularly large enterprises and industry associations, must accept co-responsibility for the quality and supply of technical talent. Beyond participating in curriculum advisory boards, companies should establish structured corporate apprenticeship programmes, contribute to equipment provision and workshop modernisation, and commit to preferred hiring of VTE graduates. Sector-specific employer coalitions for key industries such as construction, ICT, oil and gas downstream operations, and agribusiness should develop sector skills plans that guide VTE programme design and resource allocation.

Development partners including the World Bank, African Development Bank, United Nations agencies, and bilateral donors should align their VTE investments with the National TVET strategic framework, prioritising programmes that demonstrate sustainable local ownership and measurable labour market outcomes. Technical assistance to strengthen NBTE's regulatory capacity, support for digital infrastructure in remote VTE institutions, and funding for pilot innovations in flexible VTE delivery models are particularly high-priority areas for development partner engagement (World Bank Group, 2022).

Conclusion

Vocational technology is a genuine pathway to steering the economy of Nigeria in the direction of sustainability, inclusiveness and growth. The analysis carried out in this paper demonstrates that VTE's contributions span multiple dimensions of economic development: human capital formation, youth employment, poverty reduction, industrialization, gender equity, and digital economic participation. A nation with a significant youth population, skills gaps, high rate of unemployment, and diverse needs, requires strategic prioritization of its vocational technology education. It's not negotiable as it forms the bedrock for industrialization. The challenges confronting Nigeria's VTE system, funding inadequacy, instructor shortages, curriculum obsolescence, infrastructure deficits, and social stigmatization are substantial but not insurmountable. They are, in essence, policy failures that can be solved by policy solutions. With the will to make legislative changes, secure a sustainable source of funding mechanisms, establish effective partnerships between industries and education sectors, and address social biases that devalue technical training, Nigeria can shift its VTE from a marginalized sector to a powerful engine for development. The global data analyzed in this article is enough evidence to support the proposition that nations that prioritize investment in technical

and vocational education and training are rewarded with enhanced productivity, falling rates of unemployment, accelerated growth in industrialization, and a more equitable distribution of income. The time for decisive, coordinated, and well-funded action in support of vocational technology has never been more urgent.

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